

Cancelled
A2

indicator unit 20. Moreover the processor 14 is connected with an alarm 22 and a receiving chip 24. The receiving chip 24 can be formed to receive different signals. As the case may be, the receiver 24 can also be combined with an associated transmitter.

IN THE CLAIMS:

Please amend claim 1 to read as follows:

A/B
v/v
B2

1. (Amended) A measuring device comprising a measuring module (10) and a clock (12) for indicating time data, the measuring module including a data processing unit (14), a data input unit (18), and indicator unit (20), characterized in that the clock (12) is a unit galvanically separate from the measuring module (10) and in that the measuring device has means for non-touchingly and non-galvanically obtaining the indicated time data from the clock (12) and for transmitting the so obtained indicated time data to the measuring module (10).

REMARKS

Copies of pages 1, 2, 5, and 8 marked-up to show the changes made by the above amendments are enclosed.

In regard to the matter of formal drawings mentioned in paragraph 1 of the Detailed Action, Applicants will supply such formal drawings at a proper time when the application is allowed.

In regard to the drawing objection raised in paragraph 2 of the Detailed Action, Applicants are supplying herewith a copy of the first sheet of informal drawings in which Fig. 1 has been marked in red to show suggested changes to that figure to incorporate text labels into the various blocks of the illustrated block diagram. Applicants further believe Fig. 1 is the only figure requiring text labels and that no changes, by way of addition of text labels, is required for any of Figs. 2 to 5. The Examiner's approval of the suggested changes is respectfully requested.

By the above amendments, Applicants have also attended to the objections to the disclosure and claims set out in paragraphs 3 and 4 of the Detailed Action.

Turning to the rejection of claims 1-35, under 35 U.S.C. § 103(a) in view of the references applied by the Examiner, Applicants have carefully considered the applied references and the arguments advanced in connection therewith by the Examiner, and as a result of this consideration have amended independent claim 1 to more clearly set forth the invention and to more distinctly distinguish the claimed invention from the disclosures of the references. With these changes it is believed that claim 1 is now clearly in allowable condition, as explained in more detail below.

The measuring device as defined by amended claim 1 is one wherein the device comprises both a measuring module and a clock for indicating time data, and wherein the clock is a unit galvanically separate from the measuring module, with the measuring device having a means non-touchingly and non-galvanically obtaining the indicated time data from the clock and for transmitting the so obtained indicated time data to the measuring module. Therefore, the clock is not only useable as a time indicating device for the measuring module but it is a complete stand-alone clock which, with or without its being used by the measuring module, can be used as an ordinary clock or wristwatch to supply time indications to a human user (see page 2, paragraph 2 of the specifications).

None of the references teach or suggest such a dual purpose clock. U.S. Patent 4,371,945 (Karr) discloses an electronic pedometer having a signal generator 12 to be mounted to one leg of the user, a signal detector to be mounted to the other leg of the user and a processor and display module 16 to be fastened to an adjustable wrist strap. The generator 12 contains a first timer so that the generator emits ultrasonic signals at regular time intervals T_1 . The detector receives these ultrasonic signals at times T_1 depending on the distance between the generator and the detector. Each time the detector receives an ultrasonic signal from the generator it produces a further signal which is transmitted wireless to the processor and display module. This module contains a further timer which

is connected to the processor of the module. The processor and display module may be used like a stand-alone clock (see column 5, lines 27 to 48). But in this case the module is controlled by the internal timer 90 and not by the timer 58 of the generator module since the processor and display module never receives the original timing signals from the generator module but only the responses to these timing signals produced by the detector module. Therefore, it is not correct to compare the timer 58 of the generator module to the clock in the inventive device. The timer 58 of the Karr patent is not a stand-alone clock and it is not usable to control the clock of the processor and display module.

A wireless transmission of time signals is disclosed by the Karr patent. Therefore, a combination of the Karr patent with U.S. 5,485,402 (Smith), which also shows a wireless transmission of signals to and from a measuring module, does not render the inventive device obvious for someone skilled in the art. None of the documents shows a clock which is usable as a stand-alone time indicating clock in combination with a measuring module and a means for non-touchingly and non-galvanically obtaining time indications from the clock and transmitting those indications to a measuring module as claimed in claim 1.

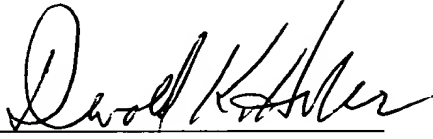
Claim 1, as amended, is accordingly submitted to be clearly allowable and its allowance is accordingly respectfully requested.

All of claims 2-35 are dependent directly or indirectly on claim 1, and therefore these claims are submitted to be also allowable by virtue of their dependency on allowable claim 1.

In view of the foregoing it is believed that this application is now in condition for full allowance, and such action at an early date is earnestly solicited.

Any additional fee required by the filing of this Response, or by the requests for Extension of Time, may be charged to our Deposit Account No. 13-0235.

Respectfully submitted,

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MEASURING DEVICE WITH A MEASURING MODULE AND A CLOCK

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Field of the Invention

The invention concerns a measuring device including a measuring module with a data processing unit, a data input unit, and an indicating unit, as well as a clock.

10

Background of the Invention

One such measuring device is known for example from US-A 5,536,249. In the there described device a clock chip is provided in the measuring module and connected to the processor of the module. The time delivered from the clock chip can be indicated on the display screen of the measuring module. A disadvantage of this solution is that the clock cannot be used separately and also cannot be combined with another type of measuring device.

20

The invention has as its object the provision of a measuring device of the aforementioned kind, making possible a greater flexibility in regard to the use of the clock in combination with a measuring module.

25

Summary of the Invention

This object is solved in accordance with the invention in that the clock is a unit ~~galvanically~~ separated from the measuring module and in that the measuring device has means for non-touchingly obtaining the time data

galvanically

indicated by the clock and for transmitting such data to the measuring module.

5 In the solution according to the invention, the clock is not only an internal clock chip but also is a stand-alone, usable, complete clock which can be used in combination with the measuring module, or instead as the case may be without such measuring module, and which as the case may be is combinable with several measuring modules for measuring different parameters.

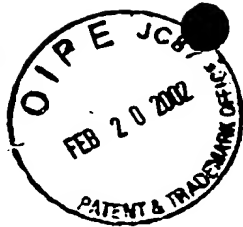
10 The clock can have a type of stop-clock function in that the time indication of the clock at the beginning of a measurement can selectively be set to a pre-given null point, and after the ending of the measurement, is resetable to the actual time.

15 The clock can have an analog time indicator with hands, wherewith the means for obtaining the time obtains the positions of the hands. Such an obtaining of the hand positions can, for example, be accomplished by use of a suitable optical means, such as a photo sensor
20 assembly for detecting emitted or reflected light or a sensor working with the ambient light.

In the measuring device of the invention a clock with an LCD screen or with a digital indicator can also be used, wherein the LCD screen is
25 selectably switchable to dark and the measuring module has a counter triggerable by a sensor sensing the LCD screen.

In another embodiment of the invention the means for obtaining and transmitting the time data includes a device for wirelessly transmitting
30 the data and having at least one transmitter in the clock and at least one receiver in the measuring module. Such a transmission link can work with optical signals, radio signals or infrared signals. Also, an ultrasonic transmission link can be used for the data transmission.

35 In a preferred embodiment the measuring module is releasably connected with the clock so that the measuring module need be connected with the clock only as needed. Such a connection can be achieved in a simple way in that the measuring module is clippable onto the clock. Such a solution is especially advantageous if under different conditions different



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Fig. 4 a schematic section through a third embodiment of the invention.

Fig. 5 a schematic section through a fourth embodiment of the invention.

Detailed Description of the Preferred Embodiments

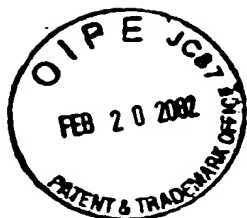
Fig. 1 shows the essential elements of a measuring device according to the invention and having a measuring module indicated generally at 10 and a clock indicated generally at 12. The measuring module contains a processor 14, serving as a data processing device, which is connected with a memory 16, a data input unit 18, and an indicator unit 20. Moreover the processor 14 is connected with an alarm 22 and a receiving chip 24. The receiving chip 24 can be formed to receive different signals. As the case may be, the receiver 24 can also be combined with an associated transmitter.

Finally, the processor 14 is connected with a measuring unit 26, which is formed to suit the existing measuring purpose, in order for example, to obtain the above-described parameters of a human body or of the environment.

The clock 12 is a customary clock, for example a digital clock, with its own clock works and the therewith associated time indicator. In the illustrated embodiment, the clock 12 is coupleable with the processor 14 of the measuring module 10 over an optical coupler 28,30. The transmission link can thereby be so formed that on one hand the time data from the clock 12 can be transmitted to the processor 14, and on the other hand, control data can also be transmitted from the processor to the clock, in order for example, to set the clock at the beginning of a measurement to a pre-given null point and after the carrying out of the measurement to again reset the clock to the actual time.

Fig. 2 shows, in schematic way, a practical embodiment of the measuring device described by way of Fig. 1. Fig. 2 shows the clock 12 with a housing 32, an indicator 34, and at least one operating element 36. On the clock housing 32 is arranged an arm band 38. The measuring module 10 is also further so fastened to the arm band 38 that the optical couplers 28,30 of

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CLAIMS

and a clock (12)
for indicating
time data,
the measuring
module including

1. A measuring device comprising a measuring module (10) with a data processing unit (14), a data input unit (18), and an indicator unit (20), ~~as well as a clock (12)~~ characterized in that the clock (12) is a unit ^{galvanically} separate from the measuring module (10) and in that the measuring device has means for non-touchingly obtaining the indicated time data from the clock (12) and for transmitting ~~said time data to the measuring module (10).~~

the so obtained indicated
and non-galvanically

2. A measuring device according to Claim 1, further characterized in that the clock (12) has a time indicator (34) which is selectably settable to a pre-given null point and which, after the ending of a measurement, is resettable to the actual time.

3. A measuring device according to Claim 1, further characterized in that the clock (12) has an analog time indicator with hands (44,46) and that the time obtaining means (52,54) obtains the hand positions.

4. A measuring device according to Claim 3, further characterized in that the time obtaining means (52,54) is formed to optically obtain the hand positions.

5. A measuring device according to Claim 1, further characterized in that the clock has a digital indicator with an LCD screen (34), that the LCD screen (34) is selectively switchable to dark, and that the measuring module (10) has a counter which is triggerable by a sensor sensing the LCD screen (34).

6. A measuring device according to Claim 5, further characterized in that the means for obtaining and for transmitting the time data includes a device (28,30) for wirelessly transmitting by way of at least one transmitter in the clock (12) and/or at least one receiver in the measuring module (10).

7. A measuring device according to Claim 1, further characterized in that the measuring module (10) is releasably connected with the clock (12).

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